Argonne National Laboratory
K-12 Educational Programs and Resources

I. For K-12 Teachers

PROGRAMS

DOE Summer Pre-Service Teacher Internship
http://www.dep.anl.gov
To: College students that will be teaching in k-12 grades.
Date: June1-August 6, 2004.
Where: Argonne National Laboratory
Application deadline: February 1 – April 1, 2004.
The purpose of this program is to give future science, math, and technology teachers experience and understanding of the research process. This experience will help them develop a lesson plan or idea journal for teaching at a particular grade level.

Laboratory Science Teacher Professional Development (LSTPD) Program
http://www.scied.science.doe.gov/scied/LSTPD
To: Science Teachers at Grades 5-9
Date: June 28-July 23, 2004
Where: Argonne National Laboratory
Application deadline: February 1, 2004.
This four-week Teachers-As-Investigators program is designed to revitalize and renew science teacher, so they can in turn, motivate their students about learning science. Research problems will be assigned in the field of environmental chemistry and forensics.

The Science of Toys
http://www.enc.k12.il.us (under classes and workshops)
To: Teachers at grades 6-9
Date: To be announced
Where: Argonne National Laboratory
Application deadline: August 7, 2004.
This course studies each toy's scientific concepts and principles. This is a fascinating way to expose the many concepts that relate to science theories. Participants will use cooperative learning techniques and hands-on science within an integrated curriculum approach.

Amusement Park Physics Workshop
http://www.enc.k12.il.us/classes
To: Middle and High School Teachers
When: March 22, 2004
Where: Argonne National Laboratory
Registration Deadline: March 15, 2004

This workshop is designed for general/physical science teachers to prepare them for amusement park visits. Hands-on use of measuring devices for distances, heights and accelerations; safety; and background for selected rides.

RESOURCES

Argonne Community of Teachers (ACT)
http://act.enc.k12.il.us
ACT is a network of science, math, computer science, and technology teachers whose purpose is to interact with other teachers, to exchange ideas and teaching materials, to link interested teachers to Argonne National Lab resources, and to assist in the development and implementation of new programs.

NEWTON
http://www.newton.dep.anl.gov
This is a computer bulletin board system available to users around the world on the Internet. The bulletin board is open free to anyone who teaches or studies science, computer science, mathematics or technology at any level. Nearly half a million people have logged on to NEWTON to ask questions of scientists, discuss teaching methods and share ideas for experiments.

GIS Illinois
http://www.gisillinois.org
The purpose of this site is to stimulate the use of Geographical Information System (GIS) and Global Positioning System (GPS) technologies with K-12 students in Illinois and throughout the country. It also provides a site where teachers can find useful links, post questions and find classroom resources and ideas they can use in their projects.

II. For Middle and High School Students

Chicago Middle School Science Bowl
http://www.dep.anl.gov/science-bowl
To: Middle School students
When: Academic competition – March 6
Fuel Cell & Solar car competitions – May 8
Where: Argonne National Laboratory
Registration: January 12-February 20, 2004
Tournament-style academic competition combined with a hydrogen fuel cell car race that challenges and recognizes students' knowledge of science, mathematics, and engineering. In the academic competition, students answer questions related to science and math in a "quiz-show" style. In the car competition, students are required to use aerodynamics, applied science and engineering skills to build a functional vehicle.

Introduce a Girl to Engineering Day
http://www.wist.anl.gov
To: Middle School aged girls
When: February 26, 2004
Where: Argonne National Laboratory
Application deadline: February 18, 2004
A Job Shadowing Program focused on middle school girls interested in learning about engineering professions. The program pairs up a student with an engineer for a day to provide insight about the requirements of this job on a day-to-day basis and what it takes to succeed in this field.

Learning Labs
http://www.dep.anl.gov/scitech/learninglabs.htm
To: Middle and High School Students
When: Scheduled
Where: Argonne National Laboratory
This 1-2 hour program offers special demonstrations, hands-on lessons and other unique activities that give students an opportunity to see what scientists do at Argonne National Laboratory.

Workforce Development Project: "Science Careers" Video Conference Series
http://www.anl.gov/OPA

To: High School Science students
A series of interactive videoconferences offered once a month during the school year. Each session features "virtual visits" to R&D facilities at Argonne by students and teachers to learn about scientific and technical professions, to interact with working professionals and to promote awareness of career options.

Science Careers in Search of Women
http://www.dep.anl.gov/women
To: High School women
Date: March 12, 2004
Where: Argonne National Laboratory
Application deadline: February 6, 2004
This program was conceived to reach out and encourage high school women to consider careers in science and technology. Information on employment trends and educational requirements will be presented.

The Argonne Rube Goldberg Machine Contest
http://www.anl.gov/OPA/rube
To: High School students
Date: February 13, 2004
Where: Chicago Children's Museum, Navy Pier, Chicago

Application deadline: January 12, 2004
The contest is named after cartoonist Reuben Lucius Goldberg, the spirit of whose work inspires the contest's weird machines and crazy mechanisms. A good Rube Goldberg machine incorporates the everyday machines people are used to seeing and connects them in ingenious ways. Your imagination is your only limit.

Pre-College Research Participation Program
http://www.dep.anl.gov
To: High School students enrolled to attend college full-time
Date: June 14-August 6, 2004
Where: Argonne National Laboratory
Application deadline: March 31, 2004
An eight-week program in which college-bound students participate in laboratory research under the direction of Argonne scientists. Students will be selected by Argonne scientists and engineers who will provide for research experiences in areas such as Biology, Chemistry, Computer Science, Engineering, Materials Science, Environmental Science, Mathematics and Physics.

Compiled by:

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